Attorney's Docket No. 001580-505

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	)	
	)	
David G. OPSTAD et al.	)	Group Art Unit: 2672
	)	
Application No.: 09/306,888	)	Examiner: T. Havan
	)	
Filed: May 7, 1999	)	
	)	
For: AUTOMATIC SYNTHESIS OF	)	
FONT TABLES FOR CHARACTER	)	
LAYOUT	)	

REQUEST FOR RECONSIDERATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated October 23, 2001, Applicants respectfully

request reconsideration and withdrawal of the rejection of the claims.

In the most recent Office Action, the rejection of all pending claims was maintained,

as being unpatentable under 35 U.S.C. § 103 in view of U.S. Patent No. 5,664,086 to

Brock et al. The Action states that the arguments presented by Applicant in the response

filed August 13, 2001 were not considered to be persuasive, for the following reasons:

A.   The Action states that one of the features upon which Applicants relied in

their arguments, namely synthesizing a font table or automatically synthesizing a data table,

is not recited in claim 29. However, when specifically addressing claim 29, Applicants'

response identified other distinguishing features of the invention recited in that claim.

Specifically, page 4 of the response contains the following statement:

> Claims 16 and 29 are directed to one manner in which a data
> table can be automatically synthesized, and recite the steps of
> "building a font map ..., determining relationships between
> items of information in the font map, ... and constructing a
> table which identifies said relationships."

The response goes on to point out that the *Brock* patent neither discloses, nor otherwise

suggests, these claimed features. The most recent Office Action does not address these

points of distinction that were brought out by Applicants. For the reasons discussed in

detail below, it is respectfully submitted that claim 29 is patentable over the *Brock* patent.

B.   With respect to claim 16, the Office Action states that the recitation of

automatically synthesizing a data table has not been given patentable weight on the grounds

that the recitation occurs in the preamble of the claim. However, the body of claim 16

recites the steps that result in the automatic synthesis of a data table. Note, in particular,

the last step of "constructing a table which identifies said relationships." The act of

"constructing" the table is, in fact, the automatic synthesis of the table. Thus, while the

term "automatically synthesizing" does not explicitly appear in the body of claim 16, this

concept is inherently present in the claimed steps. This inherency is also present in

claim 29, discussed above.

C.   The Office Action states that the *Brock et al.* patent discloses the automatic

synthesis of a data table, with reference to the procedure for blending fonts that is described

in column 12 and illustrated in Figures 30-34. It is respectfully submitted, however, that

the procedure described in this portion of the *Brock et al.* patent is not the same as the

present invention. In general, the blending of fonts as described in the *Brock et al.* patent

results in the creation of a *new* font that exhibits design features of two or more available

fonts. In contrast, the present invention creates a data table that is absent from an *existing* font. Thus, while the *Brock et al.* patent discloses a technique for creating additional, new fonts, the process of the present invention adds to the functionality of existing fonts, by synthesizing a table for those fonts that enables them to be employed with newer font layout techniques, and the like.

These differences between the present invention and the *Brock et al.* patent can be illustrated, for example, via a detailed analysis of representative claims. Before proceeding with such analysis, however, Applicants note that the Office Action refers to the algorithm depicted in Figure 29 of the *Brock et al.* patent in connection with the blending of fonts, in the following statement appearing on page 3, paragraph C:

> Therefore, *Brock* teaches synthesizing the data table when he discloses the blending of characters or glyphs or fonts in a pseudo-code form in Figure 29.

It should be noted, however, that the algorithm depicted in Figure 29 does not relate to the blending of characters, glyphs or fonts. Rather, that algorithm depicts the procedure carried out in the generator 16 for generating a particular font from the base font 12 and a descriptor file 14. See, for example, column 12, lines 6-7.

Turning now to representative claim 1, the first claimed step recites: "retrieving glyphs from a font which correspond to characters in a string of characters". At column 10, lines 24-42, the *Brock* patent discloses that the base font 12 is implemented as a set of tables which contain data for individual glyphs. For instance, the table Glyph Data, illustrated in Figure 25, contains the contour data for all of the glyphs in the base font (column 11, lines 13-15). Although the *Brock* patent does not discuss the details of a

printing or imaging process, it is apparent that this glyph data is retrieved from the base font to generate the images of characters.

The next step recited in claim 1 is that of "determining whether the font contains a predetermined data table that pertains to the layout of glyphs." In connection with this claimed subject matter, the prior Office Action referred to the *Brock* patent at column 10, lines 53-67; column 11; and Figures 21-26. The Action went on to state, "The base font in *Brock* contains a predetermined data table that pertains to the layout of glyphs." The Office Action does not identify, however, which data table is being referred to, and the *Brock* patent does not state that any of the data tables pertains to the "layout" of glyphs, e.g. positioning them relative to one another to form a line of characters.

In any event, whether or not any of the tables disclosed in the *Brock* patent pertains to the layouts of glyphs, it is respectfully submitted that the referenced portion of the patent does not disclose, nor otherwise suggest, the step of *determining* whether the font contains a predetermined data table. Rather, the procedure of the *Brock* patent operates on the basis that all necessary tables are present. This is confirmed by the above-quoted statement from the prior Office Action, i.e. the base font "contains" a predetermined table. As such, there is no need to *determine* if a particular table is present.

The significance of this determination is brought out in the next step recited in claim 1, namely "automatically synthesizing said data table, based upon data contained in the font, *if* the font is determined not to contain said data table." Thus, in the process of the present invention, the automatic synthesis of a data table is conditional upon its presence or absence in a font. A determination is first made *whether* the font contains a

predetermined data table. Then, *if* the condition should occur that the table is not present, it is automatically synthesized from data contained in the font. Thereafter, the glyphs are laid out in a line, in accordance with the data in the automatically synthesized table, and an image of the laid-out line of glyphs is generated.

The procedure recited in claim 1 operates to create a table for a font *if* that table is not already present in the font. The *Brock* patent does not disclose any such conditionality based upon the presence or absence of a table in a font. In particular, there is no teaching to suggest the step of determining whether the base font contains a predetermined data table. Rather, because it is concerned with a totally different type of operation, the *Brock* patent operates on the assumption that all necessary tables are present. Furthermore, the patent does not disclose any procedure for automatically synthesizing a missing data table, if one were to be absent.

A significant distinction here is the fact that the procedure of the present invention can be carried out within the context of a single font. For instance, claim 1 recites the steps of "retrieving glyphs from *a* font ...", "determining whether *the* font contains a predetermined data table ...", and "automatically synthesizing said data table, based upon data contained in *the* font ..." In other words, information from a font that is being employed to generate images is used for the creation of a data table missing from *that* font. In contrast, the *Brock* patent does not disclose the generation of a data table that is missing from a font. Rather, the patent discloses procedures for utilizing *one* font to generate *another* new font. Thus, while the *Brock* patent discloses a technique for automatically generating font information, the result is significantly different from the data table that is

constructed in accordance with the present invention. In the present invention, a new set of data is constructed for an existing font. In the *Brock et al.* patent, a new font is generated from one or more pre-existing fonts.

These same distinctions apply to claims 11, 19 and 26, as well as their dependent claims. Claim 11 recites that the font table synthesizer is "responsive to the absence of a predetermined data table." Claims 19 and 26 recite that the data table is synthesized "if the table is not present in the font file." These features are not taught in the *Brock* patent.

In addition to this general distinction, the particular manner in which a data table is constructed in a preferred embodiment of the present invention is significantly different from the process for generating a new font in the technique of the *Brock et al.* patent. For example, claim 6 recites the steps of "building a font map that contains information about individual glyphs in the font"; "determining relationships between items of information in the font map"; and "constructing a table which identifies said relationships." Similar recitations are found in claims 16, 22 and 29. With respect to this subject matter, the prior Office Action referred to the *Brock* patent at column 6, lines 28-67; column 7, lines 1-29; and column 11, lines 13-49. It is not apparent what information disclosed in these portions of the patent is considered to constitute a font map.

In any event, these claims do not merely recite building a font map, *per se*. Rather, they recite the steps of determining *relationships* between items of information in the font map, and constructing a table which *identifies said relationships*. The Office Action does not indicate how the *Brock* patent might be interpreted to disclose these claimed features. If the rejection of claim 6, or any of the other claims corresponding thereto, is maintained,

the Examiner is requested to present support for the rejection, by identifying the subject

matter disclosed in the *Brock* patent that is considered to be a font map, and where the

patent discloses the concepts of determining relationships between items of information in

such a font map, and constructing a table which identifies those relationships. In the

absence of such a showing, it is respectfully submitted that the rejection should not be

maintained.

Claims 7 and 8 recite further features of the invention relating to the manner in

which the font table is synthesized. Claim 7 recites that some of the information in the font

map is specific to the font, whereas other information is generic to multiple fonts. Claim 8

recites that the synthesized table contains font-specific information that is determined with

reference to generic information. Although both of these claims were rejected, neither

Office Action provided any support in the *Brock* patent for their rejection. Without such a

showing, it is respectfully submitted that the rejection should not be maintained.

Claim 10 recites another feature of the invention, in which a determination is made

whether a missing data table is one of two different types, and the table is directly

synthesized if it is of one type. However, if it is of the other type, an indication is

provided that the table is not present, and request is awaited before the synthesizing step is

initiated. Similar recitations appear in claims 21 and 28. Claim 15 also recites the two

different modes of operation. In rejecting claims 10, 21 and 28, the prior Office Action

broadly referred to columns 5-10 and Figures 9-23 of the *Brock et al.* patent. However,

the Office Action does not explain how any of these portions of the patent can be

interpreted to disclose that different approaches for synthesizing a data table are employed

in accordance with the type of table that is missing from a font. It is respectfully submitted that the *Brock* patent does not, in fact, disclose this claimed concept.

For the foregoing reasons, it is respectfully submitted that all pending claims are patentable over the disclosure of the *Brock et al.* patent. If the rejection of any of the claims is maintained, the Examiner is requested to identify how that patent is being interpreted to suggest the specific distinguishing features discussed above. In the absence of such a showing, it is respectfully submitted that the rejection should be withdrawn.

Respectfully submitted,

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